

CLAIMS

We claim:

1. An isolated polypeptide, comprising (1) an extracellular domain of the transmembrane activator and CAML (calcium-signal modulating cyclophilin ligand) interactor (TACI), and (2) a trimerizing polypeptide.

2. A homotrimeric protein complex, comprising the polypeptide of claim 1.

3. The isolated polypeptide of claim 1, wherein the TACI extracellular domain is selected from the group consisting of: (1) amino acid residues 30 to 110 of SEQ ID NO:4, (2) amino acid residues 1 to 110 of SEQ ID NO:4, (3) amino acid residues 30 to 154 of SEQ ID NO:4, and (4) amino acid residues 1 to 154 of SEQ ID NO:4.

4. The isolated polypeptide of claim 1, wherein the trimerizing polypeptide comprises the NC-1 fragment of human collagen X.

5. The isolated polypeptide of claim 4, wherein the trimerizing polypeptide comprises the amino acid sequence of SEQ ID NO:20.

6. The isolated polypeptide of claim 5, wherein the TACI extracellular domain comprises the amino acid residues 30 to 110 of SEQ ID NO: 4.

7. A homotrimeric protein complex, comprising the polypeptide of claim 6.

8. The isolated polypeptide of claim 1, wherein the trimerizing polypeptide is a trimerizing fragment of Heat Shock Binding Protein-1.

9. The isolated polypeptide of claim 8, wherein the trimerizing polypeptide has the amino acid sequence of SEQ ID NO:22.

10. The isolated polypeptide of claim 9, wherein the TACI extracellular domain comprises the amino acid residues 30 to 110 of SEQ ID NO: 4.

11. A homotrimeric protein complex, comprising the polypeptide of claim 10.

12. An expression vector comprising the following operably linked elements:

a transcription promoter;
the nucleic acid sequence encoding the polypeptide of claim 1 and
a transcription terminator.

13. A cultured cell into which has been introduced the expression vector of claim 12, wherein said cell expresses said polypeptide.

14. A method of producing a homotrimeric protein complex comprising the steps of culturing the cell of claim 13 and recovering the homotrimeric protein complex comprising said polypeptide.

15. A method of inhibiting TNF4-induced B cell proliferation comprising exposing said B cells to a homotrimeric protein complex comprising a polypeptide, said polypeptide comprising (1) a TACI extracellular domain and (2) a trimerizing polypeptide.

16. The method of claim 15 wherein said homotrimeric complex comprises the amino acid sequence of SEQ ID NO:20 and the TACI extracellular domain comprising amino acid residues 30 to 110 of SEQ ID NO: 4.

17. The method of claim 15 wherein said homotrimeric complex comprises the amino acid sequence of SEQ ID NO:22 and the TACI extracellular domain comprising amino acid residues 30 to 110 of SEQ ID NO: 4.